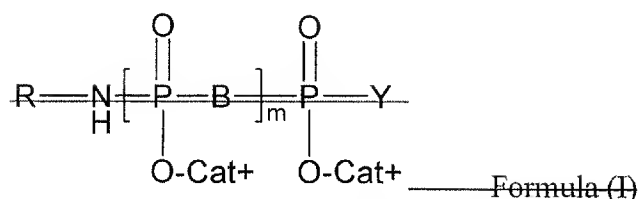


In the Claims

1-22 (canceled).

23 (currently amended). A composition of matter comprising:

a)



~~wherein Cat⁺ represents one or several identical or different organic or mineral cation(s) including proton;~~

~~m is an integer from 1 to 3;~~

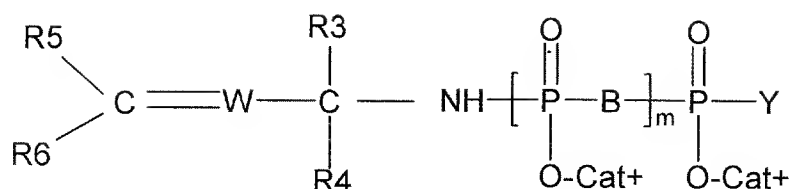
~~B is O, NH, or any group capable to be hydrolyzed;~~

~~Y = O⁻Cat⁺, a C₁-C₃ alkyl group, a group A R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;~~

~~A is O, NH, CHF, CF₂ or CH₂; and,~~

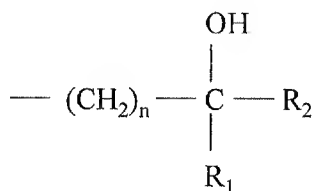
~~R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C₁-C₅₀ hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of : an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH₂), an amide (-CONH₂), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;~~

b)

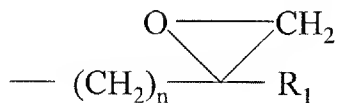


Formula (X)

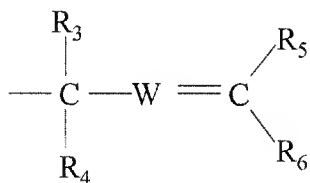
in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

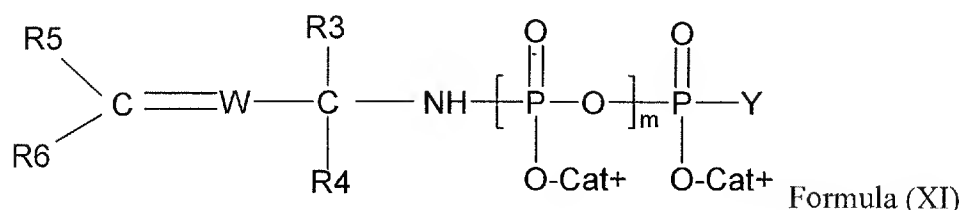


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

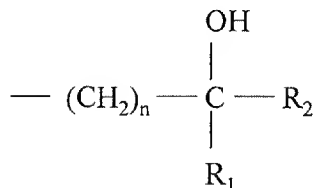


wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

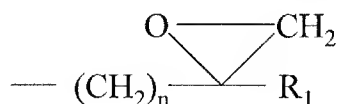
e)b)



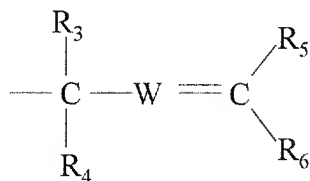
in which R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R_1 is a (C₁-C₃)alkyl group, and R_2 is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

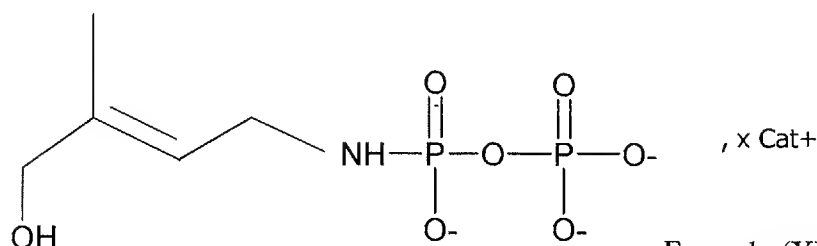


wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and



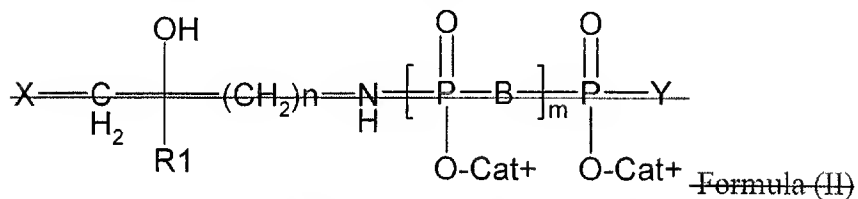
wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C_1-C_3) alkyl group, W is $-CH-$ or $-N-$, and R_6 is an (C_2-C_3) acyl, an aldehyde, an (C_1-C_3) alcohol, or an (C_2-C_3) ester;

d)c)



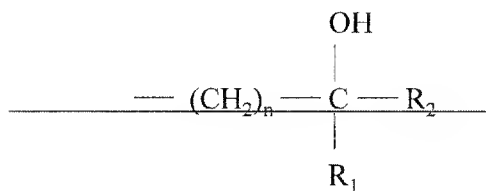
Formula (XII) N-HDMAPP;

e)d) a composition comprising a carrier and:

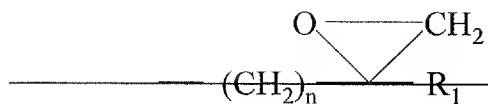


Formula (II)

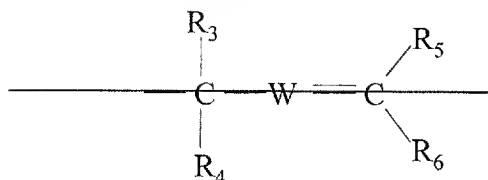
in which X is an halogen, B is O or NH , m is an integer from 1 to 3, R_1 is a methyl or ethyl group, Cat^+ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is $O^-\text{Cat}^+$, a nucleoside, or a radical $A-R$, wherein A is O , NH , CHF , CF_2 or CH_2 and R is selected from the group consisting of: wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C_1-C_3) alkyl group, W is $-CH-$ or $-N-$, and R_6 is an (C_2-C_3) acyl, an aldehyde, an (C_1-C_3) alcohol, or an (C_2-C_3) ester;



wherein n is an integer from 2 to 20, R_1 is a (C_1-C_3) alkyl group, and R_2 is an halogenated (C_1-C_3) alkyl, a (C_1-C_3) alkoxy (C_1-C_3) alkyl, an halogenated (C_2-C_3) acyl or a (C_1-C_3) alkoxy (C_2-C_3) acyl;

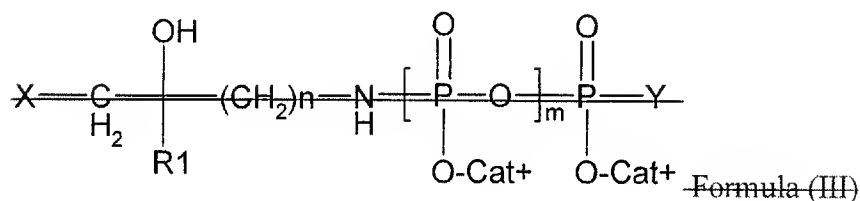


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

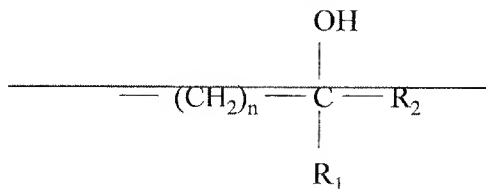


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

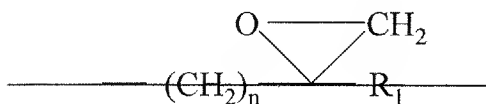
f)



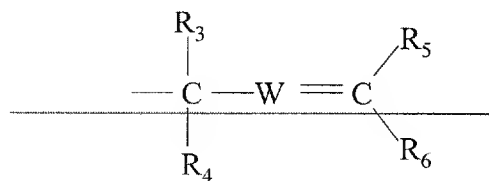
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O⁻ Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy (C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy (C₂-C₃)acyl;

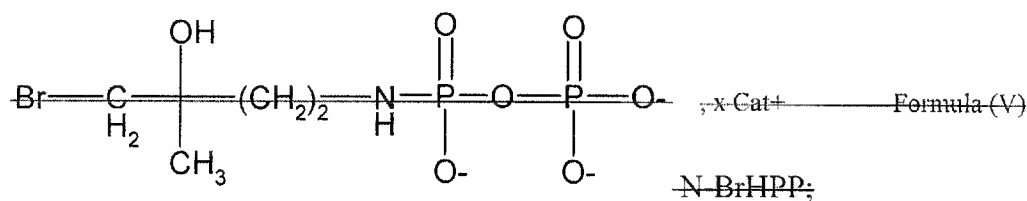


wherein n is an integer from 2 to 20, and R₄ is a methyl or ethyl group; and

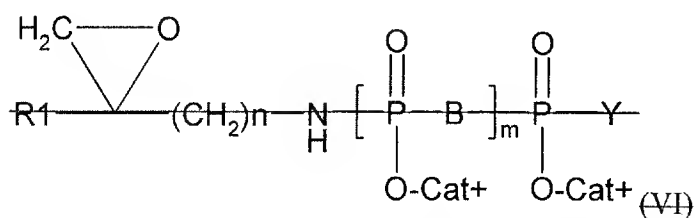


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

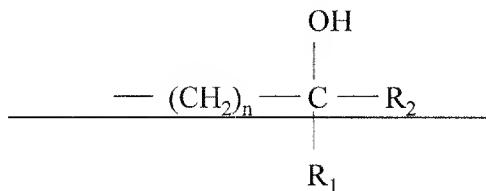
g)



h) ---

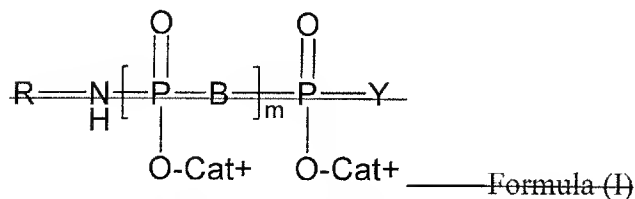


in which R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



$$\text{---}(\text{CH}_2)_n\text{---}\text{C}(\text{OCH}_2\text{R}_1)\text{---}$$
$$\begin{array}{c} \text{R}_3 \\ | \\ \text{---C---W=C} \\ | \qquad \diagup \quad \diagdown \\ \text{R}_4 \qquad \text{R}_5 \qquad \text{R}_6 \end{array}$$

—i)



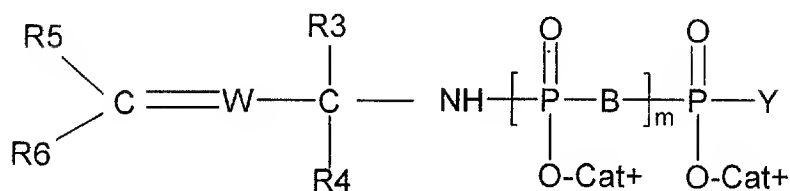
~~Y = O⁻Cat⁺, a C₁-C₃ alkyl group, a group -A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a~~

~~follic acid, a tetrahydrofollic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;~~

~~A is O, NH, CHF, CF₂ or CH₂; and,~~

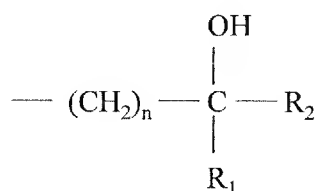
~~R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C₁-C₅₀ hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH₂), an amide (-CONH₂), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;~~

ii) i)

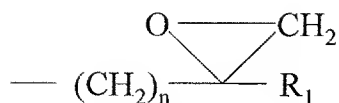


Formula (X)

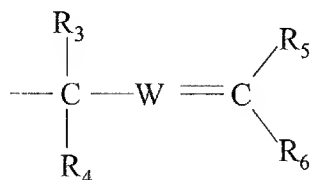
in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



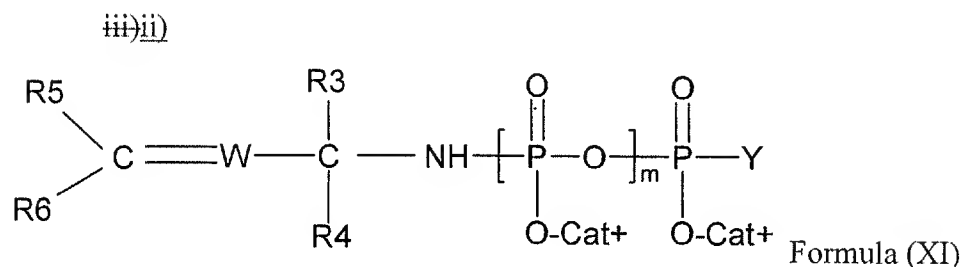
wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;



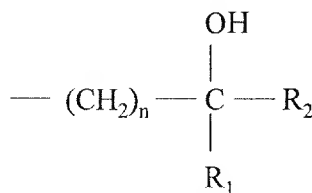
wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



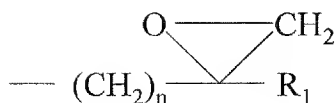
wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;



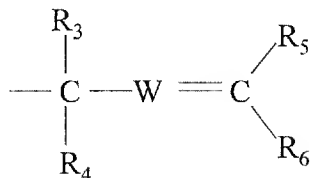
in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



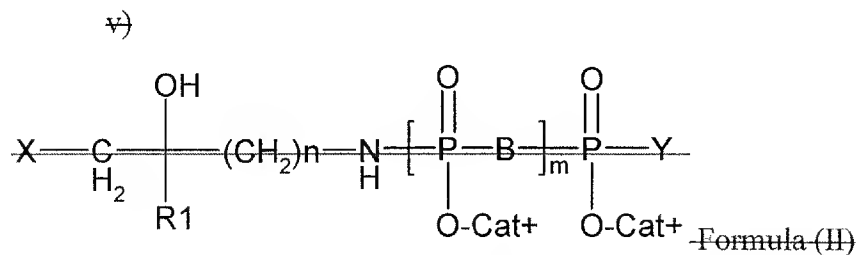
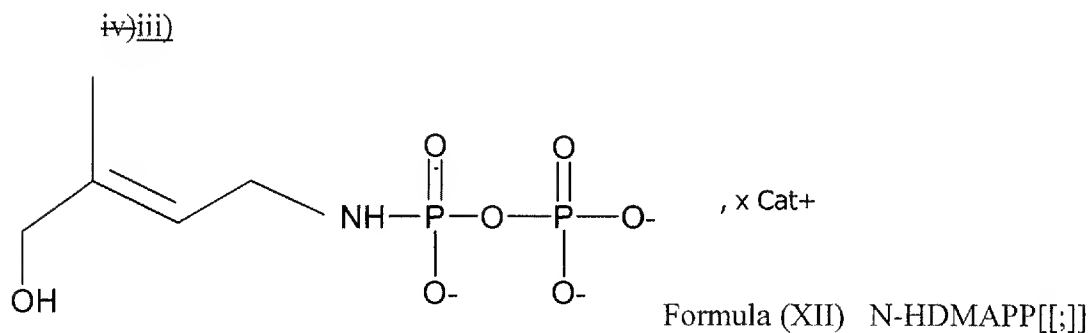
wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;



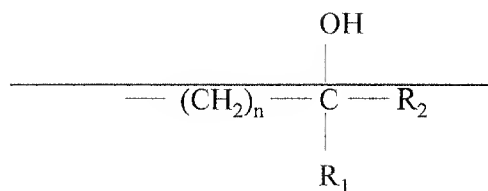
wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



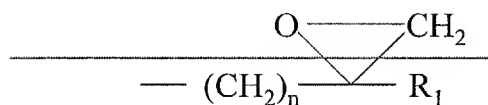
wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;



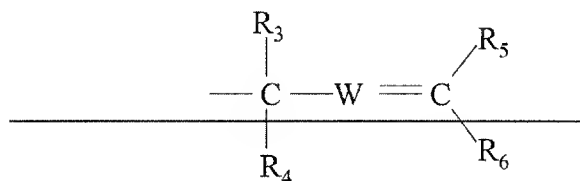
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₄-C₃)alkyl, a (C₄-C₃)alkoxy (C₄-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₄-C₃)alkoxy (C₂-C₃)acyl;

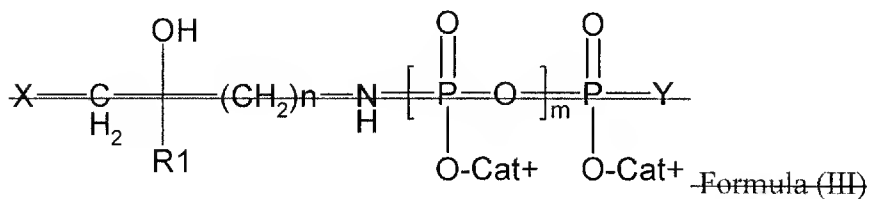


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

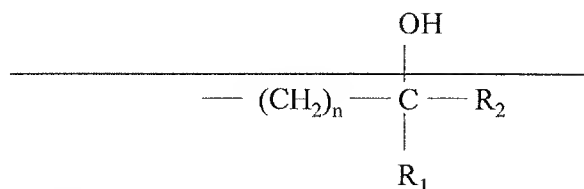


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₄-C₃)alcohol, or an (C₂-C₃)ester;

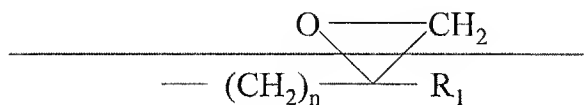
—vi)



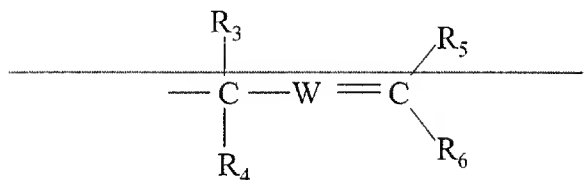
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O⁺Cat⁺, a nucleoside, or a radical A R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy (C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy (C₂-C₃)acyl;

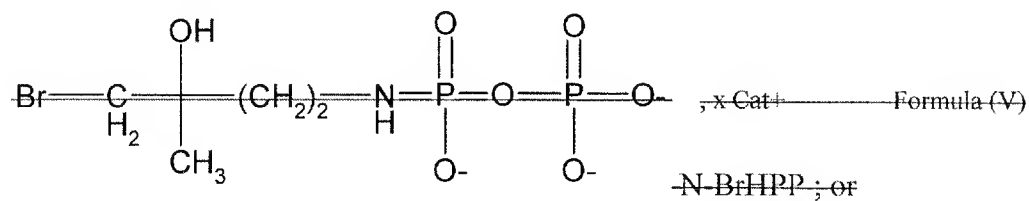


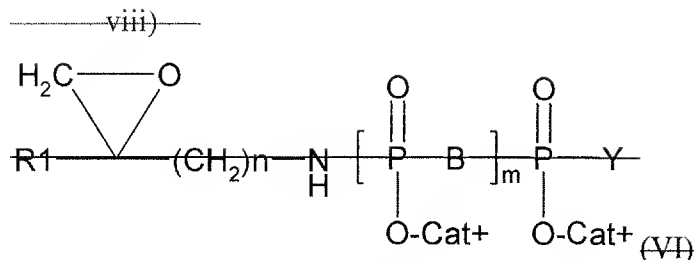
wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



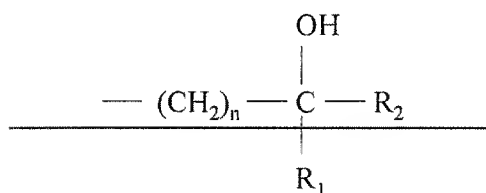
wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

—vii)

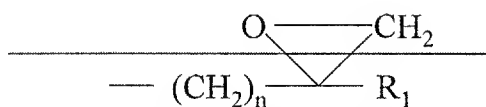




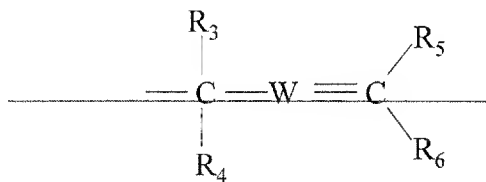
in which R1 is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy (C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy (C₂-C₃)acyl;



wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester.

24 (previously presented). The composition of matter according to claim 23, wherein said carrier is an adjuvant.

25 (previously presented). The composition of matter according to claim 24, wherein said composition of matter further comprises an antigen.

26 (previously presented). The composition of matter according to claim 23, wherein said carrier is a pharmaceutically acceptable carrier.

27 (previously presented). A method for preparing a diphosphoramidate monoester compound comprising:

- (a) reacting an alkylhalide R-X in a coupling step with a diethylphosphoramidate or diethylchlorophosphate reagent;
- (b) reacting the compound prepared in step (a) in a saponification step thereby removing O-ethyl groups; and
- (c) reacting the compound prepared in step (b) in a phosphorylation step thereby preparing a diphosphoramidate monoester,

wherein R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C1-C50 hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH₂), an amide (-CONH₂), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof, and

wherein X is a moiety capable of being displaced by a diethylphosphoramidate group under suitable conditions.

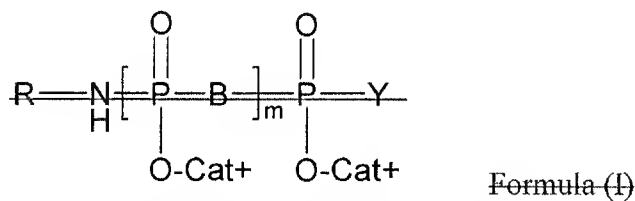
28 (previously presented). The method according to claim 27, wherein X is an NH₂ group and said R-X compound is reacted in a coupling step with a diethylchlorophosphate compound.

29 (previously presented). The method according to claim 27, wherein X is selected from the group consisting of I, Br and Cl.

30 (previously presented). A method of preparing a (E)-2-(4-azido-2-methylbut-2-en-1-yloxy)tetrahydro-2H-pyran compound, comprising providing a (E)-2-(4-chloro-2-methylbut-2-en-1-yloxy)tetrahydro-2H-pyran compound and reacting said compound with a sodium azide in a water-pentane biphasic mixture in the presence of phase transfer catalyst.

31 (currently amended). A method of activation $\gamma\delta$ T cell, the method comprising bringing a $\gamma\delta$ T cell into contact with a composition comprising a $\gamma\delta$ T cell activator selected from the group consisting of:

a)



wherein Cat⁺ represents one or several identical or different organic or mineral cation(s) including proton;

~~m is an integer from 1 to 3;~~

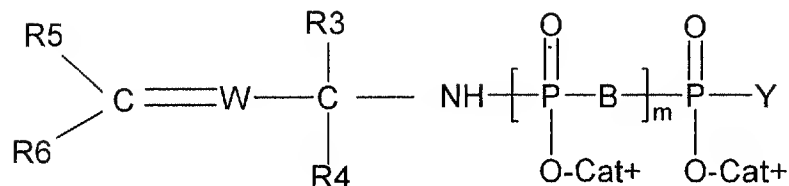
~~B is O, NH, or any group capable to be hydrolyzed;~~

~~Y = O⁻Cat⁺, a C₁-C₃ alkyl group, a group A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;~~

~~A is O, NH, CHF, CF₂ or CH₂; and,~~

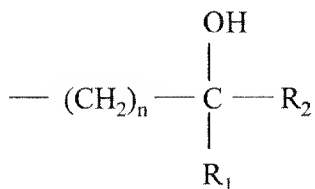
~~R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C₄-C₅₀ hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH₂), an amide (-CONH₂), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;~~

b)

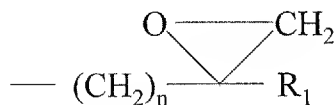


Formula (X)

in which R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:

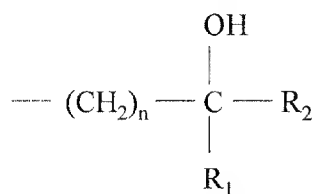
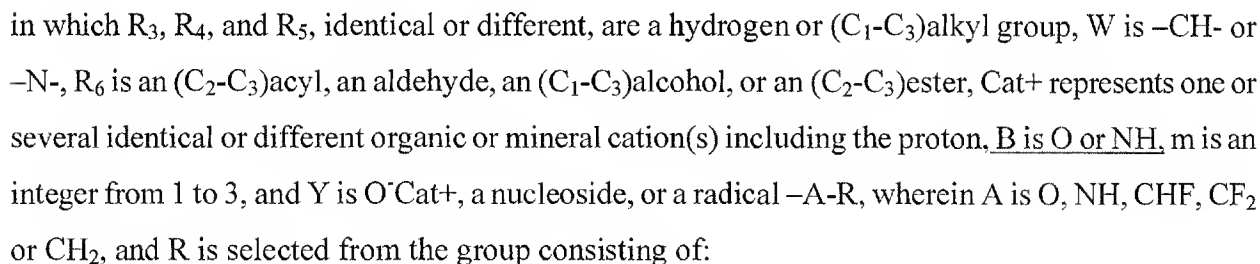


wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

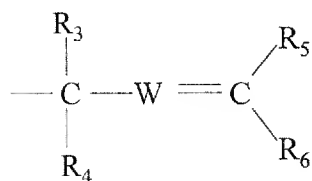


$$\begin{array}{c} \text{R}_3 \\ | \\ \text{---C---W=C} \\ | \quad \quad \diagup \quad \diagdown \\ \text{R}_4 \quad \quad \text{R}_5 \quad \text{R}_6 \end{array}$$

e) b)

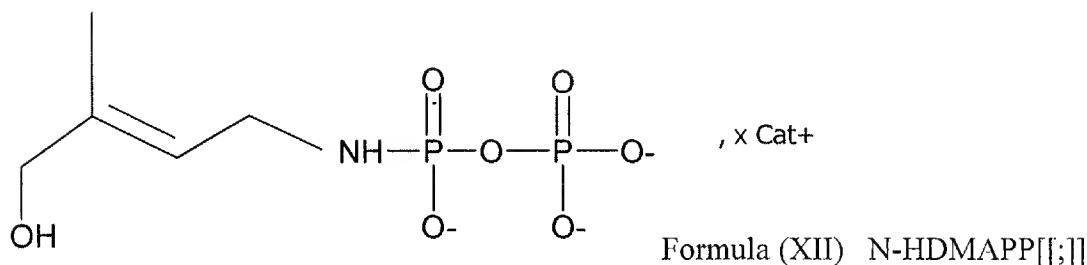

$$\text{---} (\text{CH}_2)_n \text{---} \begin{array}{c} \text{O} \text{---} \text{CH}_2 \\ \diagdown \quad \diagup \\ \text{---} \text{R}_1 \end{array}$$

wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

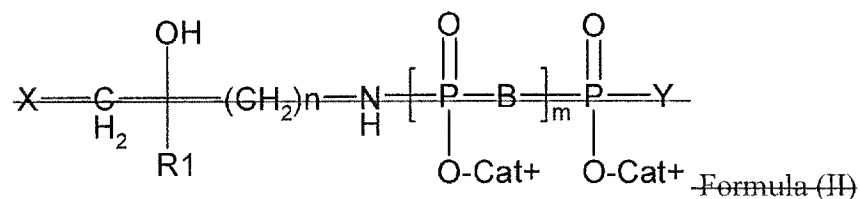


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester; and

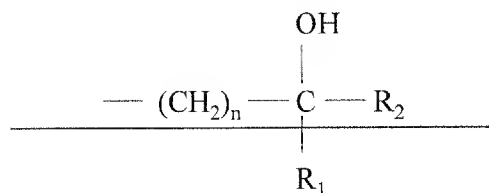
d)c)



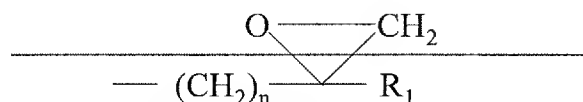
e)



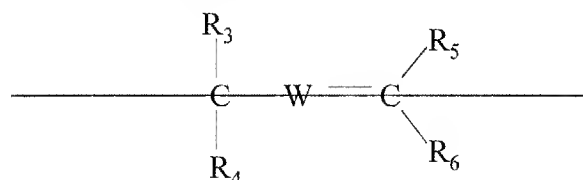
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton; and n is an integer from 2 to 20, and Y is O⁻ Cat⁺, a nucleoside, or a radical—A R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

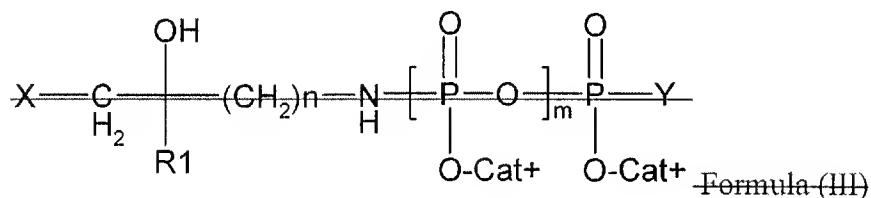


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

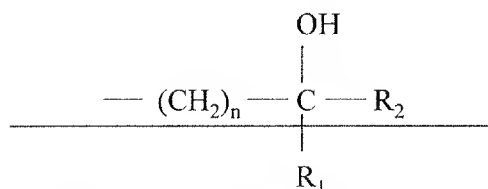


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

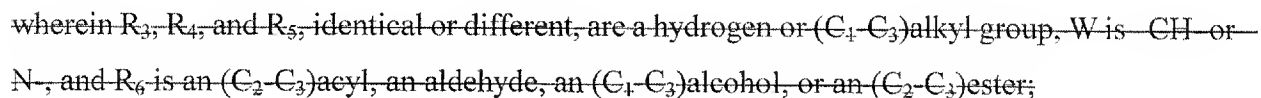
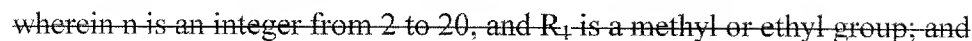
f)



in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O⁻Cat⁺, a nucleoside, or a radical A-R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



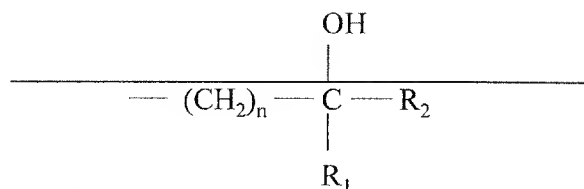
wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;


$$\text{Br}-\underset{\text{H}_2}{\text{C}}=\underset{\text{CH}_3}{\text{C}}(\text{OH})-(\text{CH}_2)_2-\underset{\text{H}}{\text{N}}-\overset{\text{O}}{\underset{\text{O}^-}{\text{P}}}=\text{O}-\overset{\text{O}}{\underset{\text{O}^-}{\text{P}}}=\text{O}-\text{O}^- \cdot x \text{ Cat}^+ \quad \text{Formula (V)}$$

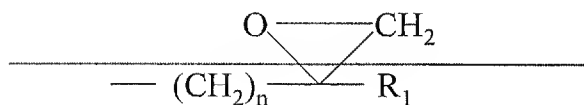
N-Br-IHP; or

$$\text{R1}-\text{C}(\text{O})-\text{(CH}_2)_n-\text{NH}-[\text{P}(=\text{O})(\text{OCat}^+)\text{-B}]_m-\text{P}(=\text{O})(\text{OCat}^+)-\text{Y} \quad (\text{VI})$$

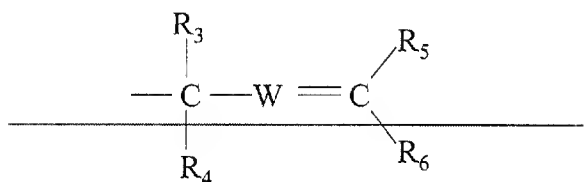
in which R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s), including the proton, B is O or NH, m is an integer from 1 to 3, and n is an integer from 2 to 20, and Y is O⁻Cat⁺, a nucleoside, or a radical—A—R₂, wherein A is O, NH, CHF, CF₂ or CH₂, and R₂ is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;



wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and

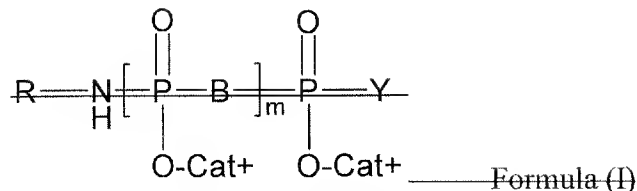


wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is CH or N, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester.

32 (previously presented). The method according to claim 31 wherein the $\gamma\delta$ T cell is brought into contact with said $\gamma\delta$ T cell activator in vitro.

33 (currently amended). A method of immunotherapy or stimulation of an immune response comprising the administration of a composition comprising a $\gamma\delta$ T cell activator selected from the group consisting of:

a)



wherein Cat⁺ represents ~~one or several identical or different organic or mineral cation(s)~~ including proton;

~~m is an integer from 1 to 3;~~

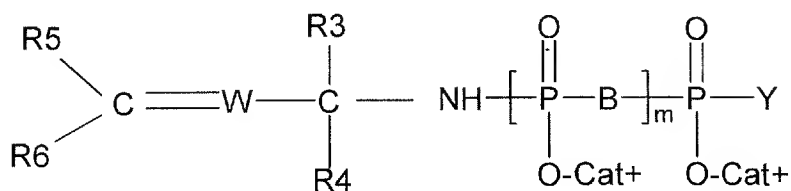
~~B is O, NH, or any group capable to be hydrolyzed;~~

~~Y = O⁻Cat⁺, a C₁-C₃ alkyl group, a group A-R, or a radical selected from the group consisting of a nucleoside, an oligonucleotide, a nucleic acid, an amino acid, a peptide, a protein, a monosaccharide, an oligosaccharide, a polysaccharide, a fatty acid, a simple lipid, a complex lipid, a folic acid, a tetrahydrofolic acid, a phosphoric acid, an inositol, a vitamin, a co-enzyme, a flavonoid, an aldehyde, an epoxyde and a halohydrin;~~

~~A is O, NH, CHF, CF₂ or CH₂; and,~~

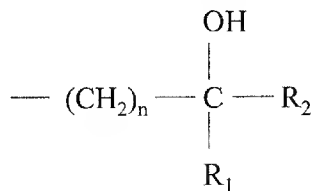
~~R is a linear, branched, or cyclic, aromatic or not, saturated or unsaturated, C₁-C₅₀ hydrocarbon group, optionally interrupted by at least one heteroatom, wherein said hydrocarbon group comprises an alkyl, an alkylenyl, or an alkynyl, preferably an alkyl or an alkylene, which can be substituted by one or several substituents selected from the group consisting of: an alkyl, an alkylenyl, an alkynyl, an epoxyalkyl, an aryl, an heterocycle, an alkoxy, an acyl, an alcohol, a carboxylic group (-COOH), an ester, an amine, an amino group (-NH₂), an amide (-CONH₂), an imine, a nitrile, an hydroxyl (-OH), a aldehyde group (-CHO), an halogen, an halogenoalkyl, a thiol (-SH), a thioalkyl, a sulfone, a sulfoxide, and a combination thereof;~~

b)a)

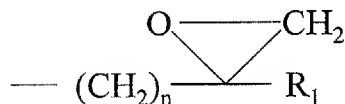


Formula (X)

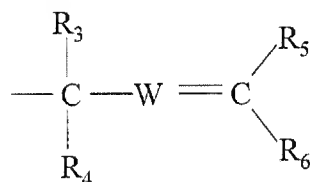
in which R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, B is O or NH, m is an integer from 1 to 3, and Y is O⁻Cat⁺, a nucleoside, or a radical -A-R, wherein A is O, NH, CHF, CF₂ or CH₂, and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R_1 is a (C₁-C₃)alkyl group, and R_2 is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

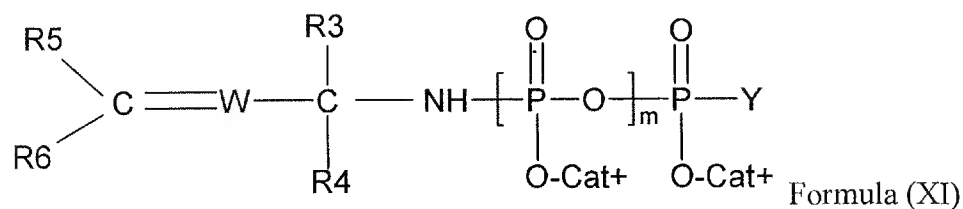


wherein n is an integer from 2 to 20, and R_1 is a methyl or ethyl group; and



wherein R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, and R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

e)b)

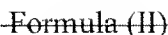


in which R_3 , R_4 , and R_5 , identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is -CH- or -N-, R_6 is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester, Cat⁺ represents one or

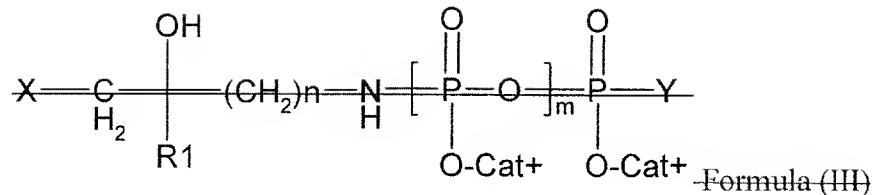
$$\begin{array}{c} \text{OH} \\ | \\ \text{---} (\text{CH}_2)_n \text{---} \text{C} \text{---} \text{R}_2 \\ | \\ \text{R}_1 \end{array}$$
$$\text{---}(\text{CH}_2)_n\text{---}\begin{array}{c} \text{O} \text{---} \text{CH}_2 \\ \diagdown \quad \diagup \\ \text{---} \text{R}_1 \end{array}$$
$$\begin{array}{c} \text{R}_3 \\ | \\ -\text{C}-\text{W}=\text{C} \\ | \quad \quad \quad \diagup \quad \diagdown \\ \text{R}_4 \quad \quad \quad \text{R}_5 \quad \text{R}_6 \end{array}$$

~~d)~~ c)

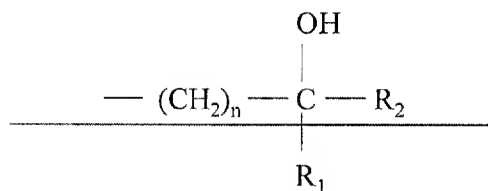



$$\begin{array}{c} \text{OH} \\ | \\ \text{---} (\text{CH}_2)_n \text{---} \text{C} \text{---} \text{R}_2 \\ | \\ \text{R}_1 \end{array}$$
$$\text{---}(\text{CH}_2)_n\text{---}\begin{array}{c} \text{O} \text{---} \text{CH}_2 \\ \diagup \quad \diagdown \\ \text{---} \quad \text{---} \end{array} \begin{array}{c} \text{R}_1 \\ \text{R}_2 \end{array}$$
$$\begin{array}{c} \text{R}_3 \\ | \\ \text{---C}=\text{W} \equiv \text{C---} \\ | \qquad \diagup \diagdown \\ \text{R}_4 \qquad \text{R}_5 \qquad \text{R}_6 \end{array}$$

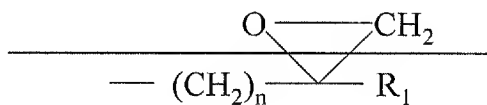
A



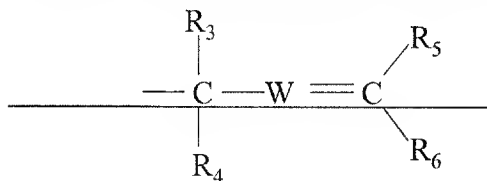
in which X is an halogen, B is O or NH, m is an integer from 1 to 3, R₁ is a methyl or ethyl group, Cat⁺ represents one or several identical or different organic or mineral cation(s) including the proton, and n is an integer from 2 to 20, and Y is O⁻ Cat⁺, a nucleoside, or a radical —A—R, wherein A is O, NH, CHF, CF₂ or CH₂ and R is selected from the group consisting of:



wherein n is an integer from 2 to 20, R₁ is a (C₁-C₃)alkyl group, and R₂ is an halogenated (C₁-C₃)alkyl, a (C₁-C₃)alkoxy-(C₁-C₃)alkyl, an halogenated (C₂-C₃)acyl or a (C₁-C₃)alkoxy-(C₂-C₃)acyl;

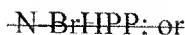


wherein n is an integer from 2 to 20, and R₁ is a methyl or ethyl group; and



wherein R₃, R₄, and R₅, identical or different, are a hydrogen or (C₁-C₃)alkyl group, W is —CH— or —N—, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester;

g)


$$\text{R1} - \text{C}(\text{O}) - (\text{CH}_2)_n - \text{N}(\text{H}) - \left[\text{P}(\text{O})(\text{O-Cat}^+) - \text{B} \right]_m - \text{P}(\text{O})(\text{O-Cat}^+) - \text{Y} \quad (\text{VI})$$
$$\begin{array}{c} \text{OH} \\ | \\ \text{---} (\text{CH}_2)_n \text{---} \text{C} \text{---} \text{R}_2 \\ | \\ \text{R}_1 \end{array}$$
$$\begin{array}{c} \text{O} \quad \text{CH}_2 \\ \diagdown \quad \diagup \\ \text{---} (\text{CH}_2)_n \text{---} \text{R}_1 \end{array}$$
$$\begin{array}{c} R_3 \\ | \\ -C=W-C- \\ | \quad \quad \diagup \\ R_4 \quad \quad R_5 \\ \quad \quad \quad \diagdown \\ \quad \quad \quad R_6 \end{array}$$

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~~N₁, and R₆ is an (C₂-C₃)acyl, an aldehyde, an (C₁-C₃)alcohol, or an (C₂-C₃)ester to a subject.~~

34 (previously presented). The method according to claim 33, wherein said subject is suffering from a tumor, solid tumor, an infectious disease, or an autoimmune disease or an allergic disease or said subject requires the stimulation of an immune response.

35 (previously presented). The method according to claim 33, wherein said composition further comprises an antigen.